

PATENT

Serial No: 09/410,916
Filed: October 1, 1999
Applicant: Jerome H. Ludwig
Title: STERILIZATION OF FIRE SPRINKLER SYSTEMS
Art Unit: 1744
Examiner: Monzer R. Chorbaji
Atty Dock: PIPE\04

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Cincinnati, Ohio 45202

April 22, 2002

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

RESPONSE

In response to the Office Action dated December 4, 2001, and the Extension of Time to respond thereto up until May 4, 2002, submitted herewith, reconsideration is respectfully requested for claims 23-31 in the above-identified application.

The Examiner has rejected claims 23-31 over Loucks U.S. Patent No. 3,084,076 (Loucks '076) in view of Singh U.S. Patent No. 5,512,249 (Singh '249) under 35 U.S.C. §103(a).

With all due respect, there is absolutely no basis in Loucks '076 and Singh '249 for the Examiner's rejection. The Examiner continuously refers to Loucks as disclosing "sterilization of a fire sprinkler system", yet Loucks '076

makes no mention of a "fire sprinkler system" at the referenced locations by the Examiner and throughout the text of the Loucks' patent. Furthermore, there is no mention of sterilization. Loucks is concerned with cleaning metal vessels including ducts or pipes which do not lend themselves to mechanical scraping to remove scale or residue. The steam serves as a carrying agent for a chemical solvent or cleaner which is entrained in the steam (see col. 3 at lines 12-19 and col. 4 at lines 11-18). Loucks' steam performs two functions in addition to that of a carrying agent, as stated at col. 4:

...(1) it serves to form a liquid or vaporous medium for the ionization of the solvent (an "acid") employed so that its reactivity is greatly enhanced and (2) by being converted to a liquid it gives up great quantities of heat, due to the heat of vaporization, which is released when a gas is converted to a liquid. The steam thereby serves as an agent to provide both reactive ions and high heat at the area most needed, viz., the interface between the cleaning composition and the walls of the vessel being cleaned.

With the above in mind, contrary to the Examiner's assertion, Loucks also is not sterilizing anything. Rather, Loucks discloses the steam cleaning of vessels and pipes of scale and ash with a chemical additive. The additives are acids or acid salts to solubilize scale, not to sterilize (see col. 2, lines 18-26).

The Examiner has particularly referred to claim 24, and has stated that Loucks teaches a step of purging the steam with sterile gas, when, in fact, Loucks does not teach purging the steam with sterile gas. The Examiner has

stated that Loucks' goal is to "sterilize the interior surfaces of a fire sprinkler system", when, in fact, Loucks discloses no such thing!

With respect to claim 25, the Examiner has asserted that Loucks teaches a step of charging sterilized water because of Loucks' goal, when, in fact, Loucks does not teach a step of charging sterilized water to sterilize the surfaces of a fire sprinkler system.

The Examiner has asserted with respect to claim 26 that Loucks teaches maintaining the sterility of the section by guaranteeing the sterilization has been accomplished, when, in fact, Loucks does not teach maintaining the sterility of any section!

The Examiner has asserted with respect to claims 27-28 that Loucks teaches the use of a second sterile gas under pressure, when, in fact, Loucks does not teach any such thing. The gases even include "flue gases" which simply remove water.

With respect to claim 30, the Examiner has asserted that Loucks teaches a temperature of the steam as between 100°Celsius to about 140°Celsius, when, in fact, Loucks does not teach such temperatures, rather, the temperature is usually between the boiling point of water and about 250°Fahrenheit, etc.

With respect to claim 23, the Examiner acknowledges that Loucks fails to disclose the use of a temperature sensor, but looks to Singh '249 for such a sensor.

With respect to main claim 23, the Examiner simply concludes, without any support, that all the limitations are "inherent steps essential to achieving a sterilization of a fire sprinkler system as taught by Loucks", when, in fact, Loucks teaches no such thing. Furthermore, each of the steps of claim 23 is not inherent as assumed by the Examiner. First, because Loucks is not sterilizing a fire sprinkler system inherently or otherwise. Loucks also does not disclose such a system having sprinkler heads, let alone inactivating the sprinkler heads by removing them and replacing them with temporary fittings. Loucks does not disclose utilizing a temperature sensor to detect the temperature at a position in an isolated section of the system. Obviously, there is no inactivation of the sprinkler heads during the delivery of the steam because there is no sprinkler system or sprinkler heads disclosed by Loucks. Again, obviously Loucks is not concerned with killing microorganisms and sterilization of his sections, Loucks is concerned with the removal of scale by the action of steam containing a solvent or chemical cleaning agent, as stated above.

In brief, there is absolutely no support for any of the statements used by the Examiner in his reliance upon Loucks, as they relate to claims 23-31.

Furthermore, in the last office action of June 19, 2001, the Examiner, when referring to Loucks '076, admitted that the patent does not teach applicant's method of inactivating sprinkler heads, the use of temperature sensors, sterilized water, a second sterilized gas and use steam for sterilizing a

fire sprinkler system. Accordingly, the Examiner has readily admitted in the earlier office action that Loucks '076 fails to support his current position.

The Examiner has relied upon Singh '249 as a reference in the art for sterilizing a fire sprinkler system, when, in fact, Singh makes no such disclosure or suggestion. Singh '249 employs steam to sterilize a transfer conduit, not a complex fire sprinkler system. While Singh does teach a temperature sensor/discharge valve at the end of the transfer line, it does not teach the use of temperature sensors to insure sterilization of his conduit, let alone a complex fire sprinkler system that is isolated according to applicant's method with the inactivation of sprinkler heads, the use of temperature sensors in the isolated section, and sterilizing the section, followed by returning the section in the system to operation. In other words, Singh is totally deficient when reference is made to the claimed steps of applicant's main method 23 for thermally sterilizing a fire sprinkler system and all claims 24-31 which depend therefrom.

The MPEP, under Section 706.02(j) states:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable

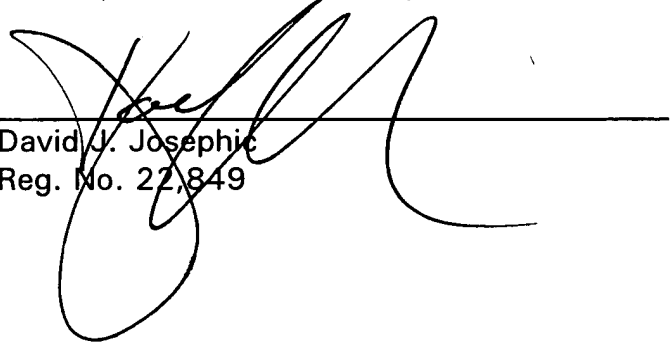
expectation of success must both be found in the prior art and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). See MPEP § 2143 - 2143.03 for decisions pertinent to each of these criteria. (Emphasis added.)

The Examiner's current rejection utterly fails to make a *prima facie* case of obviousness under 35 U.S.C. §103 for applicant's claims 23-31. Accordingly, a prompt allowance of these claims is respectfully requested.

If any further issues develop, the Examiner is encouraged to contact the undersigned attorney.

Respectfully submitted,

WOOD, HERRON & EVANS, L.L.P.



David J. Josephic
Reg. No. 22,849

2700 Carew Tower
Cincinnati, OH 45202
PH: (513) 241-2324
FX: (513) 421-7269